

REMARKS / DISCUSSION OF ISSUES

Claims 1 – 11 and 14 – 20 are pending in the application. Claims 1 and 11 are independent.

In the present response, claims 1 and 11 are amended. The support for the claim amendments may be found in Applicant's specification, for example, page 6, lines 20 – 32. No new matter is added.

35 U.S.C. 102(e)

Claims 1 – 11 and 14 – 20 are rejected under 35 U.S.C. 102(e) over Cimini, JR. et al. (US Publication No. 20030133427, hereinafter "Cimini").

Applicant submits that for at least the following reasons, claims 1 – 11 and 14 – 20 are patentable over Cimini.

For example, claim 1, in part, requires:

"determining an allocated transmission time for each of the wireless stations based on a set physical transmission rate, wherein each of the wireless stations has individually allocated transmission time based on at least the amount of data that needs to be transmitted by each of the wireless stations."

Cimini, apparently discloses that the packet size is chosen inversely proportional to the node data rate (paragraph [0042]), and that packet size is set so that the maximum transmission times of different data rates are approximately the same (paragraph [0050]). In contrast, the claimed invention requires that an allocated transmission time depends on a set physical transmission rate wherein each of the wireless stations has individually allocated transmission time based on at least the amount of data that needs to be transmitted by each of the wireless stations, and thus the transmissions times of the wireless stations are not necessary approximately the same.

In the Office Action, page 3, the Office alleged that Cimini, Fig. 5, discloses an individual determination of allocated transmission time. Applicant respectfully disagrees. Although Fig. 5 shows two different transmission times for nodes 1 and 2, having different times does not imply that they are determined individually. Cimini, in

paragraph [0034], referring to Fig. 5, discloses a relationship between transmission times (t_1 , t_2) and data rates (R_1 , R_2) to illustrate the effect of overheads in IEEE 802.11 MAC performance. Since Cimini discloses that (t_1 , t_2) and (R_1 , R_2) are interrelated by Equation (3), the times (t_1 , t_2) are not independent, and therefore, the times (t_1 , t_2) cannot be reasonably be interpreted as individually allocated times.

The Office alleged that in page 1, paragraph [0005] and [0003], and Fig. 5, Cimini teaches each of the wireless stations has individual transmission time based on the need (requirement of mixed rate nodes) of each of the wireless stations. Apparently, Cimini is not concerned about how much data that needs to be transmitted by each station, but rather is only concerned about the nodes' transmission rates. Applicant submits that Cimini does not disclose that the individual allocation of transmission time depends on the amount of data that needs to be transmitted by each of the stations.

Cimini is related to packet shaping for mixed rate 802.11 wireless networks. As noted in Cimini, paragraph [0031], a node obtains transmission time by a contention-based access mechanism (CSMA/CA). Therefore the access to the wireless medium for transmission is sought by the node itself, not by allocation. In accessing the wireless medium using a contention-based access mechanism, there is no mechanism or need to determine how much data that needs to be transmitted by each of the nodes. There is no individual allocation of transmission time based on the amount of data that needs to be transmitted by each node in CSMA/CA, therefore, a skilled person would not be led to individually allocate transmission times for the node.

Therefore, Cimini fails to disclose the claimed feature: determining an allocated transmission time for each of the plurality of wireless stations based on a set physical transmission rate, wherein each of the wireless stations has individually allocated transmission time based on at least the amount of data that needs to be transmitted by each of the wireless stations.

In view of at least the foregoing, Applicant submits that claim 1 is patentable over Cimini.

Similarly, independent claim 11, in part, requires:

“the access point allocates a transmission time for each of the wireless stations based on their transmission requirements at a set physical transmission rate that is fixed for the service interval, wherein each of the wireless stations has individually allocated transmission time based on at least the amount of data that needs to be transmitted by each of the wireless stations.”

Applicant essentially repeats the above arguments for claim 1 and applies them to claim 11 pointing out why Cimini fails to disclose that an allocated transmission time depends on a set physical transmission rate and that individual transmission time is allocated based on at least the amount of data that needs to be transmitted. Therefore, claim 11 is patentable over Cimini.

Claims 2 – 10 and 14 – 20 are patentable because at least they respectively depend from claims 1 and 11, with each claim containing further distinguishing features.

Withdrawal of the rejection of claims 1 – 11 and 14 – 20 under 35 U.S.C. 102(e) is respectfully requested.

Conclusion

In view of the foregoing, Applicant respectfully requests that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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